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| 22428 7590 01/07/2009 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | | |
| EXAMINER | | | | |
| SCHELL, LAURA C | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/786,562

Applicant(s)

SAGE, BURTON H.

Examiner

LAURA C. SCHELL

Art Unit

3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6, 8, 9, 26, 27, 61 and 62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8, 9, 26, 27, 61 and 62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 61, 62, 1-3, 6, 8 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matzuk (US Patent No. 3,807,228). Matzuk discloses a system for monitoring fluid flow along a passageway (Figs. 1 and 2) comprising: a source of radiation (44; please note that the definition of "radiation" according to the Encarta online dictionary is: "physics energy emitted in rays or waves: energy emitted from a source in the form of rays or waves, e.g. heat, light, or sound"

{<http://encarta.msn.com/encnet/features/dictionary/DictionaryResults.aspx?refid=1861697724>} and as col. 2, lines 42-43 disclose, the invention uses a type of radiant energy (sounds waves) to make the thermal marker in the fluid in the conduit) adapted to expose a portion of the fluid in the passageway to the radiation at a first position along the passageway such that at the first position the temperature of the exposed fluid beside the walls of the passageway is lower than the temperature of the exposed fluid nearer the center of the passageway (Figs. 1 and 2 disclose that the waves 44 are focused to a point F in Fig. 2 which heat a specific portion of the fluid (46); col. 3, lines

49-56); a light source that generates a beam of light that illuminates the fluid at a second downstream location along the passageway (Matzuk discloses an energy source 42 and further discloses in col. 3, lines 1-12 that the energy source (42) and the detector (43) can be any commercially available devices for producing a known energy beam between them. Therefore if Applicant does not consider this disclosure to include a light source and light detector as one of the "any commercially available devices for establishing a known sound or other energy beam between themselves across the pipe", it is the examiner's opinion that it is well known in the art to use a light source and light detector to detect/measure the change in intensity of the light beam/energy source when a hot spot/exposed and heated portion of fluid flows through the detector); and an energy detector positioned to receive a portion of the beam, wherein the detector measures a change in the intensity of the beam when the exposed portion of the fluid passes through the beam (Matzuk discloses an energy detector (43) and further discloses in col. 3, lines 1-12 that the energy source (42) and the detector (43) can be any commercially available devices for producing a known energy beam between them. Therefore if Applicant does not consider this disclosure to include a light source and light detector as one of the "any commercially available devices for establishing a known sound or other energy beam between themselves across the pipe", it is the examiner's opinion that it is well known in the art to use a light source and light detector to detect/measure the change in intensity of the light beam/energy source when a hot spot/exposed and heated portion of fluid flows through the detector).

In reference to claim 1, Matzuk discloses that the temperature of the exposed fluid near the center of the passageway is higher than the temperature of the exposed fluid beside the wall of the passageway at the second position along the passageway (Figs. 1 and 2; col. 3, lines 49-56).

In reference to claim 62, Matzuk discloses that the beam has an optical axis that is at a right angle to the passageway (Fig. 1 discloses that the beam 48 is created at a right angle to the passageway).

In reference to claim 2, Matzuk discloses that the detector is positioned along the optical axis such that the detector measures a decreased intensity with the passage of the exposed portion of the fluid (Fig. 1).

In reference to claim 3, Matzuk discloses that the detector is displaced from the optical axis such that the detector measures an increased intensity with the passage of the exposed portion of the fluid (Fig. 1).

In reference to claim 6, Matzuk discloses that the fluid is a liquid (col. 1, lines 55-56).

In reference to claim 8, Matzuk discloses a processor that measures a time period between exposing the portion of the fluid and detection of the passage of the exposed portion of the fluid by the detector (col. 2, lines 4-17).

In reference to claim 9, Matzuk discloses that the processor calculates a velocity of the fluid from the time period and the known distance between the first position and the second position (col. 2, lines 4-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matzuk (US Patent No. 3,807,228) in view of Yin et al. (US Patent No. 6,386,050). Matzuk discloses the device substantially as claimed including that the device can be used with other types of radiation other than sound waves (col. 2, lines 43-44), however, Matzuk does not disclose that the heater is an infrared laser or that the device uses a valve to start and stop fluid flow. Yin, however, discloses a similar device (Fig. 4) which uses an infrared laser (42) as the heater, and further discloses that the device may be equipped with valves to start, stop and control the fluid flow (Fig. 6, 92). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Matzuk with the infrared laser and valve, as taught by Yin, as both allow

finer control of the device and use of the device which would ultimately allow for more precise use and applications.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5, 6, 8, 9, 26, 27, 61 and 62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **LAURA C. SCHELL** whose telephone number is

(571)272-7881. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Simons can be reached on (571) 272-4965. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Laura C Schell/
Examiner, Art Unit 3767

/Nicholas D Lucchesi/
Supervisory Patent Examiner, Art Unit 3763